

A4

page 5, line 1: cancel "Patent Claims"; and
page 6, line 6: cancel "Abstract" and substitute therefor --ABSTRACT OF
THE DISCLOSURE--.

In the claims:

Cancel claims 1 - 3 and substitute the following claims:

A5

4. (New) A method of measuring the two-dimensional potential distribution and of determining the two-dimensional doping distribution in a CMOS semiconductor component, comprising the step of:
determining the minimum lateral resolution by measuring the phase of an electron beam by electron holography.

5. (New) The method of claim 4, further comprising the steps of:
- preparing a thinned cross-sectional sample of the semiconductor component;
- generating a planar electron wave;
- modulating the planar electron wave by transmitting it through the thinned cross-sectional sample to derive an image wave;
- optically enlarging the image wave;
- superposing the enlarged image wave and a planar reference wave by means of an electron bi prism in a transmission electron microscope to derive an electron hologram;
- registering the electron hologram;
- extracting the phase of the image wave by Fourier analysis; and
- determining the two-dimensional potential distribution from the phase image.

6. The method of claim 5, wherein the step of enlarging the image wave is carried out by an objective lens.

A5
Conc.

7. The method of claim 5, wherein the electron hologram is registered in a CCD camera.

8. The method of claim 5, wherein the two-dimensional doping distribution is determined by adjusting the potential distribution by numeric simulations of a fabrication process.

Respectfully submitted,



Karl Hormann
Registration No.: 26,470

Area Code (617)-491-8867